

IN THE SPECIFICATION

Please replace the paragraph starting at page 7, line 10, and ending at page 8, line 4, with the following.

Therefore, it has hitherto been general practice to provide a sliding layer on the belt guide side (inner surface) of the seamless belt base material. The purpose is to reduce the resistance due to contact of the fixing belt with the belt guides 316, ~~416~~ 416a and 416b and sliding plates 340, 440 in FIGS. 3 and 4. It has been proposed to form a sliding layer by using polyimide resin. However, because the thermal conductivity of what is called resin-based materials including polyimide resin is approximately 300 times as low as the thermal conductivity of nickel, which is the base material, (nickel $0.92 \text{ W/cm} \cdot ^\circ\text{C}$, polyimide resin $2.9 \times 10^{-3} \text{ W/cm} \cdot ^\circ\text{C}$), the start-up time becomes long and the advantage of the nickel materials that thermal conductivity is good disappears. Polyimide resin requires high material costs, and process costs also increase because a polyimide resin film is formed on the inner surface of the belt. Furthermore, there are many cases where during the film forming process of polyimide resin, moisture is absorbed in the polyimide film and the excellent characteristics of polyimide are lost.

Please replace the paragraph starting at page 10, line 6, and ending at line 15, with the following.

A metal belt according to the present invention is characterized in that the metal belt is made of a nickel-iron alloy manufactured by an electroforming process and that

when the iron content of the nickel-iron alloy is denoted by F (mass %) and the sulfur content is denoted by S (mass %), the nickel-iron alloy satisfies relationships expressed by the following equations:

$$0.001 \leq S \leq 0.13 \text{ and}$$

$$85 \times S + 3 \leq F \leq 350 \times S + 3$$

Please replace the paragraph beginning at page 11, line 3, and ending at line 15, with the following:

By ensuring that in a metal belt of a nickel-iron alloy manufactured by an electroforming process, the sulfur content S and the iron content F satisfy relationships expressed by the following equations:

$$0.001 \leq S \leq 0.13 \text{ and}$$

$$85 \times S + 3 \leq F \leq 350 \times S + 3$$

it is possible to provide a thin-walled metal belt having excellent wear resistance, heat resistance suitable for high-speed printing, thermal conductivity, flexibility and flexing characteristics and by using this metal belt in a fixing belt, it is possible to provide a heat heating device which has high reliability.

Please replace the paragraph beginning at page 12, line 14 and ending at line 24, with the following:

A fixing belt of the present invention is characterized in that the fixing belt has at least a metal layer and a release layer, that the metal layer is made of a nickel-iron alloy

manufactured by an electroforming process, and that when the iron content of the nickel-iron alloy is denoted by F mass % and the sulfur content is denoted by S mass %, the nickel-iron alloy satisfies relationships expressed by the following equations:

$$0.001 \leq S \leq 0.13 \text{ and}$$

$$85 \times S + 3 \leq F \leq 350 \times S + 3$$

Please replace the paragraph starting at page 16, line 5 and ending at line 15, with the following.

The metal layer 1 is formed from an endless metal belt manufactured by an electroforming process, and this endless metal belt is made of a nickel-iron alloy. In the present invention, the nickel-iron alloy which constitutes this metal layer 1 is such that the iron and sulfur contents satisfy the following relationships when the iron content is denoted by F mass % and the sulfur content is denoted by S mass %:

$$(1) \quad 0.001 \leq S \leq 0.13, \text{ and} \quad (\oplus)$$

$$(2) \quad 85 \times S + 3 \leq F \leq 350 \times S + 3 \quad (\oplus)$$

Please replace the paragraph starting at page 22, line 3, and ending at line 7, with the following.

By using frequency f [Hz] of an exciting circuit, magnetic permeability μ and resistivity ρ [Ωm], skin depth σ [m] is expressed by the following equation:

$$\sigma = 503 \times (\rho/f\mu)^{1/2}$$